refraining from exploiting that profit opportunity by expanding their shares, then it calls for additional entry from SBLD and other RBOC affiliates to compete down the supracompetitive price levels, thereby increasing economic welfare

### B. AT&T Has Increased Rates for the Consumer Segment

10. AT&T raised its interstate basic rates by 22 percent from 1993 to 1996,[5] even though average access charges for the interexchange carriers fell by nine percent in that period.[6] AT&T's costs other than access have presumably been declining as well.[7] If the long-distance market were truly competitive, the incumbent interexchange carriers would have passed through to consumers the reductions in both access and nonaccess costs.

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(...continued)

[4] WorldCom has network capacity of its own, and it, too, has been increasing its market share, partly by acquisitions and partly by internal growth. (Joe Bender, "Long Distance Market Shares," *op. cit.*) Its internal growth suggests that AT&T's wholesale prices might also be excessive.

[5] AT&T raised basic residential rates by an average of 6.3 percent in January 1994 ("AT&T Proposes $750 Million Rate Hike, New Calling Plan Aimed at High-Volume Residential Users," *Telecommunications Reports*, January 3, 1994); 3.7 percent in December 1994 ("AT&T and Rivals Boost Rates Further," *Wall Street Journal*, November 29, 1994, p. A3); 4.3 percent in February 1996 ("AT&T to Raise Basic Prices an Average 40c a Month," *Bloomberg News Services*, February 16, 1996. See also "AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports*, February 26, 1996, p. 27); and 5.9 percent in December 1996 ("AT&T Follows MCI, Sprint with Long Distance Rate Increases," *Telecommunications Reports*, December 2, 1996). The cumulative increase is 1.063*1.037*1.043*1.059-1=0.22. AT&T also increased rates between 1991 and 1993, but it accelerated the rate of increases after 1993.

[6] From 1993 to 1996, average switched access charges fell from 6.66 cents to 6.04 cents per conversation minute. *FCC Monitoring Report*, Table 5.11, May 1996, p. 474.

[7] In its price cap filing before the FCC, AT&T reported data showing that, from 1985 to 1991, it reduced its capital costs relative to output by 2.1 percent per year, and it reduced its non-capital costs by 7.3 percent per year. (R. Schmalensee and J. Rohlfs, "Productivity Gains Resulting from Interstate Price Caps for AT&T," report filed by AT&T in CC Docket No. 92-134, July 1992. The cost reductions I report here are in real terms.) Subsequently, AT&T reported that it continued to improve productivity: "Total cost of telecommunications services declined [in 1993 and 1994] despite higher volumes, *in part* because of reduced prices for connecting customers through local networks. *In addition, we improved our efficiency in network operations, engineering and operator services.* With lower costs and higher revenues, the gross margin percentage rose to 41.8% in 1994 from 39.0% in 1993 and 37.2% in 1992." (AT&T 1994 Annual Report, p. 24.) After 1994, AT&T stopped reporting such detail about its long distance operations, but there is no evidence of any reversal in the long-term trend in cost reductions after 1994.

11. AT&T's increases in interstate basic rates affected most of its residential customers: in 1995, 64 percent of its Oklahoma residential customers faced full basic rates.[8] These customers include two groups—those who subscribe to no calling plan and those who subscribe to a calling plan but whose toll usage is insufficient to generate any discount.

12. Some customers do subscribe to discount calling plans and pay less than basic rates. It is even true that the percentage of AT&T's customers subscribing to calling plans has been increasing, so the average percentage discount received by residential customers as a whole has been increasing. But, even taking account of the increase in the average discount, the rates paid by the average residential customer have increased since 1993. For Oklahoma, the average discount off basic rates on a dollar of residential AT&T toll calls in 1995 was only 12.8 percent.[9] I have (generously) estimated that the average discount in Oklahoma was about 15.7 per cent in 1996.[10] To construct an extreme hypothetical illustration, suppose that *no* AT&T customer had a discount-calling plan in 1993. Under that extreme assumption, AT&T residential customers in Oklahoma would have paid an average rate that was about 2.8 percent higher in 1996 than they paid in 1993.[11] Contrary to that extreme illustration, however, according to Yankee Group national surveys, 20.5 percent of AT&T households had a calling plan in 1993,[12] and the percentage had increased to only 38.4 percent in 1996.[13] A plausible estimate of the increase in AT&T's average interstate rates for Oklahoma consumers, *accounting for discounts*, is about

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[8] Based on calculations using PNR and Associates' "Bill Harvesting II" database (1995).

[9] Based on calculations using PNR and Associates' "Bill Harvesting II" database (1995).

[10] This estimate is based on Yankee Group data from its annual Technologically Advanced Family surveys on the national percentage of AT&T customers with discount plans in 1995 and 1996—31.3 percent and 38.4 percent, respectively. It also assumes that the average discount is proportional to the percentage of customers receiving discounts. (Based on data from PNR and Associates' "Bill Harvesting II" database (1995).) Even if the best available discounts might have increased from 1995 to 1996, new plan customers tend to receive lower discounts than previous ones, because the ones who sign up early are the ones for whom the plans are most advantageous. $0.128*(0.384/0.313) = 0.157$.

[11] $1.22*(1-0.157)=1.028$.

[12] The Yankee Group, "The Technologically Advanced Family Tracking Study—1993," Table 327.

[13] The Yankee Group, "1996 TAF Survey: Implications for Convergence," December, 1996, Table 307, p. 717.

twelve percent from 1993 to 1996.[14] Yet during the period, as I mention above, AT&T's access costs declined, and its other costs per minute presumably declined as well. AT&T claims to have more than flowed through the access charge decreases that occurred in 1997, but it certainly did not eliminate the increase in rates relative to access charges that it had accumulated from 1993 to 1996.

### C. The New One-Rate Calling Plans Do Not Change the Results

13. The interexchange carriers have introduced calling plans with flat per-minute rates; an example is AT&T's One Rate plan, which charges 15 cents per minute regardless of distance or time of day. These new plans do not change the conclusion that AT&T has increased rates since 1993. I have found that, for the U.S. as a whole, residential customers make direct-dial domestic calls that would average about 18.1 cents per minute if they were rated at AT&T's current interstate interLATA basic rates.[15] Since 15 cents under the One Rate plan is lower than 18.1 cents, the One Rate plan might be attractive to many Oklahoma residential consumers who are paying basic rates.

14. The One Rate plan would not benefit all residential customers, however. The plan would not be attractive for customers who make most of their calls on weekends, for which the rate is lower than 15 cents per minute. The plan's rate is also only one penny less than AT&T's current night rate. The new plan also would not benefit many customers who are already on another plan. For instance, a True Reach customer who already receives a 25 percent discount would typically pay more under the One Rate plan.[16]

15. My main point about AT&T's One Rate plan is this: the primary reason that some consumers might find the One Rate plan attractive today is that *AT&T has substantially raised its basic rates over the last several years*. If instead AT&T had merely passed through its savings

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[14] (1+0.22)*(1-0.157)/(1-0.084)-1 = 0.123, where 0.22 is the cumulative fractional increase in AT&T's basic rates from 1993 to 1996, where 0.157 is the average estimated discount in 1996, and where 0.084=0.128*20.5/31.3 is the average estimated discount in 1993.

[15] Based on calling data for Oklahoma customers in PNR and Associates' "Bill Harvesting II" database (1995).

[16] \$0.181*(1-0.25)=\$0.136 per minute, which is less than \$0.15 per minute.

in access charges—even ignoring its other cost savings—then its 15-cents-per-minute One Rate plan would be unattractive in comparison. As I have said, AT&T raised its basic rates by about 22 percent between 1993 and 1996. Suppose that AT&T had not increased its rates. Then today the average basic rate for direct-dialed calls would be only about 15.6 cents a minute.[17] If AT&T had passed through the industry-average decrease in access charges of 0.6 cents since 1993,[18] then the average basic direct-dialed rate today would be 15.1 cents a minute, which is virtually equal to AT&T's 15-cents-per-minute rate for its One Rate plan. If AT&T had also passed through its other cost reductions, today's basic rates would be even lower. In summary, net of access charges AT&T increased basic rates for direct-dialed calls by about 4 cents per minute, or 44.5 percent.[19] If instead it had passed through its cost decreases, as would have happened in a truly competitive market, AT&T's touted One Rate plan would be irrelevant. Thus, in introducing its One Rate plan, AT&T has nothing to brag about. Still, its pricing plans have been clever: (1) It was able to charge supracompetitive rates for its residential customers for several years. (2) Just in time for the Section 271 proceedings, it has now introduced its One Rate plan, which it can hope might sway some opinions during the proceedings. (3) And it can be confident that, in spite of making the One Rate plan available, many customers will continue paying basic rates for quite a while.[20] The combination of rising basic rates and optional calling plans, which the long distance carriers change over time, effectively exploits many customers'

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[17] Based on calling data from PNR and Associates, *op. cit.*, and AT&T rates in effect in December 1996, the average basic rate for domestic direct-dialed calls for U.S. residential customers was \$0.191. \$0.191/1.22 = \$0.157. I implicitly assume that AT&T increased rates for direct-dialed calls by about the same percentage as for other calls.

[18] *FCC Monitoring Report, op. cit.*

[19] \$0.191-\$0.157+\$0.006=\$0.040. (\$0.191-\$0.0604)/(\$0.157-\$0.0666)-1=0.445.

[20] Between 1992 and 1996, the calling plan subscription rate of AT&T residential customers increased from 20.5 percent to 38.4 percent—only 4.5 percentage points per year. Yankee Group TAF surveys, *op. cit.* Last year AT&T introduced its One Rate Plus plan. This plan offers a rate of 10 cents per minute regardless of time of day, day of week, or distance. However, the One Rate Plus plan also carries a monthly charge of \$4.95. That subscription fee makes the plan unsuitable for low-usage customers. For instance, for a typical customer with less than 99 minutes of use per month, the cost of using the One Rate Plus plan exceeds that of the original One Rate plan. Further, for a typical customer with monthly usage of 61 minutes or less, even basic rates would be less costly than the One Rate Plus plan (based on an average interstate interLATA basic rate of 18.1 cents per minute). Time will tell to what extent the One Rate plans affects the average rate that residential customers pay.

lack of information and inertia. With their pricing, the interexchange carriers segment the market, separating the active "bargain-hunters" from the "victims."

### D. Consumer Interexchange Rates Exceed Costs

16. In an FCC proceeding, AT&T asserted that the costs of serving customers with bills less than $3 per month exceed the revenues received from them; *i.e.*, AT&T's break-even point is $3 per month.[21] The incumbent carriers sometimes justify their increases in basic rates by claiming that they must cover the costs of serving customers with low usage. This explanation for increasing rates, even if true, is clearly inadequate. It does not explain why AT&T should have increased rates for two groups: (1) the 22 percent of its customers with monthly bills above $3 but less than $10,[22] the threshold for eligibility for its True USA and True Reach calling plans; and (2) the many residential customers who have bills exceeding $10 per month who did not benefit from the calling plans available before AT&T introduced its One Rate plan. If $3 per month of billings is the break-even point, then, at a minimum, AT&T is making supracompetitive profits from those two groups, and it increased its profits as it increased basic rates. One can, moreover, derive an alternative estimate of the break-even point using data provided by Professor Robert Hall. Data from an affidavit he filed in FCC proceedings on SBC's first Section 271 application for Oklahoma imply that the break-even point is lower than AT&T's claim. Specifically, his figures imply a break-even point of about $2; thus, even more than 22 percent of AT&T's customers probably have bills between $10.00 and the break-even point.[23]

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[21] Letter from C. L. Ward, AT&T, to W. F. Caton, FCC, Re: *Ex Parte Presentation in Support of AT&T's Motion for Reclassification as a Non-Dominant Carrier*, filed in CC Docket No. 79-252 (April 24, 1995).

[22] Letter from C. L. Ward, AT&T, to W. F. Caton, FCC, Re: *Ex Parte Presentation in Support of AT&T's Motion for Reclassification as a Nondominant Carrier* (March 9, 1995).

[23] Affidavit of Robert Hall on behalf of MCI in *Application of SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc., for Provision of In-Region, InterLATA Services in Oklahoma*, CC Docket 97-121. Professor Hall claims that an additional customer costs $.98. (Hall at ¶ 42) As discussed below, he also estimates that the incremental cost of usage is 10 cents a minute. (Hall at ¶ 36) (To be conservative, here I assume that this 10-cent cost does not double count the per-customer costs of $.98.) Although he is not clear on the point, I tentatively infer that this cost applies to direct-dialed calls. If the average basic rate for direct-dialed calls in Oklahoma is about 19 cents, then Professor Hall's figures imply that the break-even point would be a monthly bill of about $0.19*$0.98/($0.19-$0.10)=$2.07.

17. Further, Professor Hall's own data confirm that AT&T is making supracompetitive profits from its residential customers—*even those with calling plans*—if it is as efficient as its smaller competitors. First, Professor Hall estimates that long distance service costs are a little below ten cents per minute.[24] He uses the approach of estimating costs by finding "the best available price . . . for offices and homes," which some resellers offer. I am convinced that those smaller carriers can have costs no greater than about 10 cents per minute, since they are clearly betting the firm that their costs are no higher than what they charge. I interpret that estimate as an upper bound, since a reseller which can profitably sell at that price might pay more than the incremental costs of one of the facilities-based carriers for network transmission and switching. Second, I estimate that the average rate paid by AT&T's residential Oklahoma customers in late 1996 for their interstate interLATA usage was about 16.5 cents per minute.[25] Therefore, Professor Hall's own cost estimate would imply that AT&T's profit margin for the average residential customer in Oklahoma was about 6.5 cents per minute.

18. Even AT&T's residential customers with discount calling plans are paying rates above costs. The maximum standard discount available through AT&T's True Reach plan is 25 percent. So a typical high-volume True Reach customer would have paid about 14.2 cents a minute for direct-dialed calls,[26] which exceeds Professor Hall's estimated cost of 10 cents a minute. Subscribers to AT&T's 15-cent One Rate plan must also be paying rates at least 50 percent higher than costs. Even subscribers to AT&T's new 10-cent One Rate Plus plan are paying about $5 per month more than Unidial charges, since the One Rate Plus plan has a $4.95 monthly subscription fee, whereas Unidial charges no such fee.[27]

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[24] Affidavit by Professor Robert Hall, *op. cit.*, at ¶ 36. He later clarifies that a rate of about 10 cents per minute is available from some carriers without a monthly subscription or minimum. See Robert E. Hall, Declaration on behalf of MCI Telecommunications Corporation, MCI Exhibit D, regarding *Application of BellSouth Corporation, BellSouth Telecommunications, Inc. and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in South Carolina*, CC Docket No. 97-208 (October 20, 1997), ¶ 139.

[25] Calculation using data from PNR and Associates, "Bill Harvesting II" (1995).

[26] $0.19*(1-0.25) = $0.142.

[27] Hall (October 20, 1997), *op. cit.*, ¶ 139.

19 I assumed in the above paragraph that AT&T's costs equal those of its smaller competitors. An alternative is that AT&T is less efficient than its competitors. According to one report submitted on behalf of AT&T, AT&T's average costs are about 14 cents per minute.[28] That cost level would be 40 percent higher than that of its smaller competitors. If so, then the implication is unchanged: entry into the in-region long distance market by SBLD and other RBOC affiliates is warranted. On the one hand, if AT&T's profit margins for residential customers are as high as I calculate in the above paragraph, then entry is needed to force AT&T to reduce its prices closer to costs to benefit consumers. On the other hand, if AT&T's costs are higher than those of other carriers, then entry is still needed to force AT&T both to reduce its prices and to become more efficient. In the latter case, the economic welfare gain from wringing out 40 percent excess costs from the carrier with over half the market would certainly exceed all other sources of economic gains or losses being discussed in this proceeding.

## IV. An Analytical Approach to Assessing SBLD's Entry Prospects

20. Recall my discussion above that the FCC's data show that the market share of smaller interexchange carriers has been growing relative to that of the Big Three. This fact suggests that there is a promising market opportunity for small or perhaps even newly-entering carriers. If, to the contrary, the market share of the small carriers were declining, I would be more concerned about SBLD's likely prospects in the interexchange market.

21. The FCC data are qualitatively consistent with another study by a market survey company called Odyssey. It reports the percentage of U.S. households using each long distance carrier:[29]

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[28] R. Glenn Hubbard and William H. Lehr, Affidavit on Behalf of AT&T Corp., AT&T Exhibit A, regarding *Application of BellSouth Corporation, BellSouth Telecommunications, Inc. and BellSouth Long Distance, Inc. for Provision of In-Region, InterLATA Services in South Carolina*, CC Docket No. 97-208 (October 20, 1997), ¶ 122.

[29] Sandra Guy, "Reselling Upends IXCs' Marketing Plan," *Telephony* (July 1, 1996), p. 20.

**Table 1**
**Market Shares of Interexchange Carriers**
**(Percentage of U.S. Households)**

| Carrier | 4Q94 | 1Q95 | 4Q95 | 1Q96 |
|---|---|---|---|---|
| AT&T | 74 | 71 | 66 | 65 |
| MCI | 11 | 12 | 13 | 12 |
| Sprint | 4 | 4 | 4 | 5 |
| Other | — | 7 | 12 | 12 |
| Don't know/no answer | 11 | 6 | 5 | 6 |

22. According to these data, too, while AT&T's market share is declining, MCI's and Sprint's shares are stable, and the other carriers' share is growing. The study also reports that "consumers who rated AT&T's image as 'very good' fell from 68% two years ago to 59% in the latest survey."[30] Emphasizing the growing market share of resellers, the article states, "The findings point to a potentially lucrative field for the Bell companies, which can succeed in their foray into long-distance by becoming 'super resellers,'"[31] according to a separate report by the Yankee Group.

23. Based on its assessment of the attractiveness of the RBOCs and turnover of customers of the interexchange carriers, a report by the Yankee Group estimates that the RBOCs in the aggregate will achieve about a 10 to 15 percent share of the national interLATA household market 18 months after entering the market.[32] If SBLD's success were equal to that of the average RBOC and if it were to focus on customers in its home region, then its share of the household market within its region would also equal between 10 to 15 percent. Since it has about 26 percent of RBOC access lines, then, based on the Yankee Group predictions, its share of the national interLATA household market would be about 2.6 to 3.9 percent.[33]

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[30] *Ibid.*

[31] *Ibid.*

[32] The Yankee Group, "IXCs versus RBOCs: The Battle of the Century" (December, 1995), p. 24. This report also estimates that the RBOCs will lose about the same percentage of their local market in the same period of time (p. 26).

[33] These calculations account for SBC's merger with Pacific Telesis.

24. I should point out that these data are suggestive, not definitive. Although insufficient by themselves, the combination of these data and the other information discussed in the sections below more convincingly portray the picture of SBLD's entry prospects.

25. The supracompetitive profits and pricing discipline of the Big Three carriers would have to diminish in the face of the market entry of SBLD and other new entrants. From the point of view of customers, the lower prices resulting from such a breakdown in profit margins and pricing discipline would be good news.[34]

26. Already, there are signs of downward pressure on prices due to RBOC interLATA entry; as one article puts it, "Further evidence of a changing long-distance market is apparent in BellSouth's recent agreement to buy wholesale long-distance transport from AT&T at what the RHC called 'the low end' of the 1¢- to 2¢-per-minute range. The agreement signifies a potentially radical change in consumer and business services pricing and the possibility of a real price war, said Robert Rich, vice president of telecommunications research at The Yankee Group."[35] These pressures could only increase when SBLD and the other RBOCs enter the in-region interLATA market.

27. Now we come to my main point. We have seen that smaller carriers are gradually gaining market share. Still, so far their gains have been insufficient to break down the pricing discipline of the Big Three carriers.[36] I explain in the sections below that SBLD has several strengths. These strengths might be sufficient for a more effective challenge to the Big Three

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[34] SBLD might choose to offer superior quality or service rather than lower prices to attract customers. The incumbent long distance carriers might respond in kind, or they might simply reduce prices. The effect on the market and the benefit to consumers would be similar to what would happen if SBLD entered as a discount carrier.

[35] *Ibid.* At the time of the contract, BellSouth could only use the wholesale transport for cellular and out-of-region resale activities. Similarly, Bell Atlantic reportedly negotiated bulk transport at 1.5 cents per minute. "Bell Atlantic Adopts Retail Long Distance Strategy," *Telecommunications Reports* (September 23, 1996).

[36] See., *e.g.*, P. W. MacAvoy, "Tacit Collusion under Regulation in the Pricing of Interstate Long-Distance Telephone Services," *Journal of Economics and Management Strategy*, v. 4, No. 2 (Summer 1995), pp. 247-185; also see W. E. Taylor and J. D. Zona, "An Analysis of the State of Competition in Long Distance Telephone Markets," Study Attached to Ex Parte Comments Examining the Competition of Interstate Long Distance Telephone Markets, FCC CC Docket No. 79-252 (April, 1995).

than the existing smaller carriers have presented, particularly for low-usage customers who have faced a succession of price increases in recent years

28. Let me expand on that point about low-usage customers. That market segment—predominantly residential customers—is the largest group of customers, yet it is neglected in the competition among interexchange carriers. I report above that, in 1995, 64 percent of AT&T's residential customers in Oklahoma faced full, undiscounted toll rates.[37] Also consider Table 2 below. It shows data for 1996 from the FCC's market share report and a calculation I have made from the data. The FCC report shows each major interexchange carrier's number of pre-subscribed lines and total operating revenues. From the FCC report, I show results for the ten largest interexchange carriers for which the FCC reports data on both presubscribed lines and revenues, plus data for all other interexchange carriers combined.[38]

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[37] Based on results of analysis of data from PNR and Associates, Inc., "Bill Harvesting II" (1995).

[38] Joe Bender, "Long Distance Market Shares," *op. cit.* Of the interexchange carriers for which the FCC reports both presubscribed lines and operating revenues, I have selected the ten carriers with the largest number of presubscribed lines. Had I selected the largest carriers based on their revenues, that selection process would have introduced a bias toward displaying carriers which have high revenue per line relative to AT&T. Since I have selected the carriers with the largest number of lines, I avoid that selection bias. One should use these data with caution. The data for revenues might not be fully comparable to the data for presubscribed lines and might not be defined in the same way by different carriers. One should use special caution regarding the revenue figure for "all others," since it is calculated as a residual from the figure for total revenues, which the FCC staff has estimated.

**Table 2**
**Revenue per Presubscribed Line**

| | Presubscribed Lines in June 1996 | Revenue (M) in 1996 | Revenue per Line in 1996 |
|---|---|---|---|
| AT&T | 99,821,499 | $39,264 | $393 34 |
| MCI | 24,338,086 | $16,372 | $672.69 |
| Sprint | 10,905,940 | $7,944 | $728.41 |
| WorldCom | 4,288,401 | $4,485 | $1,045 84 |
| Excel Telecommunications | 3,313,287 | $1,091 | $329.28 |
| Frontier companies | 2,097,182 | $1,563 | $745.29 |
| LCI | 1,965,532 | $1,103 | $561 17 |
| Cable & Wireless | 584,802 | $919 | $1,571.47 |
| U.S. Long Distance | 356,932 | $188 | $526 71 |
| Business Telecom | 171,239 | $149 | $870.13 |
| Vartec Telecom | 116,898 | $470 | $4,020 60 |
| General Communications | 124,969 | $143 | $1,144.28 |
| All others | 3,996,101 | $8,342 | $2,087 53 |
| Total | 152,080,868 | $82,033 | $539.40 |

29. What we see in the last column is that all the carriers except one have higher revenues per presubscribed line than AT&T does. The only exception is Excel Telecommunications, which, according to the FCC report, is a pure reseller and which is only about two percent of AT&T's size. The lesson is that the carriers other than AT&T tend more to focus on high-volume customers than AT&T does.

30. This pattern is not surprising, since interexchange carriers bear some fixed costs per customer. Such fixed costs include a fee paid to a local exchange carrier for processing a pre-subscription order and some of the costs of marketing, customer care, and perhaps some billing costs. To some extent the latter three types of costs increase with a customer's volume of usage, but there is a fixed component, too. As I explain in Section VI below, the low-volume market segment should be less costly for SBLD to serve than it is for other existing inter-exchange carriers, so SBLD's entry holds out the prospect of more intensified competition for this segment and more benefits to those consumers than for the other segments where competition is relatively stronger.

## V. SBLD HAS THE POTENTIAL TO HAVE LOW INCREMENTAL COSTS

31. There are functions for which economies of scope would potentially strengthen SBLD's prospects for success when it enters the interexchange market. These economies might enable it to challenge the Big Three interexchange carriers more effectively than small carriers and resellers have to date. Absent legal and regulatory restrictions, such economies could exist for at least the following functions:

- Certain transmission facilities
- Sales and marketing
- Customer care
- Billing.

Such economies of scope could conserve on the economy's scarce resources and benefit consumers. Nevertheless, Section 272 of the Telecommunications Act and the FCC rules implementing the Act require SBLD to operate largely as a separate, arms-length subsidiary for at least three years; and the FCC could extend the requirement beyond that period. Thus, the principal permissible joint activities are sales, sales support systems, and customer support. The separate subsidiary restriction may tend to postpone the time when competitive forces will determine whether vertically integrated or non-vertically integrated carriers are the most effective and efficient means of serving customers

## VI. SBLD'S MARKET POSITION

32. There is evidence about the market credibility of local exchange carriers such as SWBT. C/J Research conducted a survey in January 1996. The survey called Comm-Trac asked residential customers about their satisfaction with companies providing long-distance service, local telephone service, cellular service, and cable TV service. The most relevant data compare customers' opinions of the current long-distance companies with local exchange carriers. The survey found that local exchange carriers met or exceeded expectations for 85.4 percent of respondents, whereas long distance carriers did so for 91.1 percent. To put these figures in perspective, cable TV companies met or exceeded expectations for only 67.3 percent of respon-

dents. Thus, although satisfaction with the long distance carriers is slightly higher than it is with local exchange carriers, satisfaction with both is high, and the difference in satisfaction between long distance carriers and local carriers is small relative to the difference in satisfaction between either of these types of carriers and the cable companies. The survey also asked respondents whether they would change their carrier when a new company begins offering service. The result is that 12.8 percent of residential customers say they would either definitely or probably switch long-distance carrier, while 15.6 percent say they would definitely or probably switch local exchange carrier. This small difference between the two markets contrasts with the large difference between either of those two markets and the cable TV market: for the latter market 37.0 percent said that they would definitely or probably switch.

33. The Yankee Group conducted a similar study among consumers and found similar levels of satisfaction with the three kinds of carriers as the Comm-Trac survey did. The Yankee Group found that 89 percent of consumers rated the services of long distance carriers as good or excellent; 85 percent of them rated local exchange carrier services at that level; and just 61 percent rated the services of cable TV companies at that level.[39] The data indicate high satisfaction with local exchange carriers in general as service providers. The Yankee Group updated its study in 1996, and the update shows results for individual RBOCs. To help add to the information from the previous Yankee Group study, Table 3 reports results for more detailed questions; I show the percentage of customers who rate a carrier as excellent; and I compare ratings of SWBT with interexchange carriers and cable companies:[40]

[39] The Yankee Group, "IXCs versus RBOCs: The Battle of the Century" (December 1995), p. 33. The report also finds ratings of 76 percent for electric companies and 70 percent for cellular carriers.

[40] The Yankee Group, "The 1996 TAF Survey: Implications for Convergence" (1996), p.14; also detailed data obtained directly from The Yankee Group.

**Table 3**
**Percentage of Households Rating Carrier as Excellent**

| Subject | SWBT | Interexchange Carriers | Cable TV |
|---|---|---|---|
| Professional and Courteous Personnel | 23.9 | 25.2 | 11.5 |
| Accurate and Easy-to-Understand Bills | 25.0 | 25.5 | 15.6 |
| Timely Resolution of Problems | 22.3 | 22.1 | 11.2 |
| Quick Access to Customer Service | 17.6 | 21.0 | 10.5 |
| Value for the Money | 14.9 | 18.3 | 6.3 |
| High-Quality Transmission | 24.5 | 26.2 | 8.3 |
| Trustworthiness | 23.4 | 24.4 | 8.7 |
| Deserving of Loyalty | 20.2 | 23.4 | 7.5 |

For most measures, SWBT's ratings are close to those of the interexchange carriers, and, again, the cable TV companies lag far behind.

34. A survey by IDC/LINK yields similar information. In its 1995 Home Media Consumer Survey, the research firm asked U.S. households to rate their long distance company, local telephone company, and cable TV company.[41] Table 4 shows the results for SWBT and interexchange carriers:

**Table 4**
**Percentage of Households Rating Carrier as Very Good or Good**

| Subject | SWBT | Interexchange Carriers |
|---|---|---|
| Customer Service | 75 | 80 |
| Service Reliability and Product Quality | 74 | 81 |

35. Again, the differences between SWBT and long distance carriers is small. If the difference were large, then one would have substantial concerns about SBLD's entry prospects. But such small differences in percentages generally imply that there is a large customer segment which rates SWBT as well as or better than the interexchange carriers; further, such a small difference in percentages can be overcome by reasonably diligent efforts.

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[41] IDC/LINK reports selected results in Rona Shuchat. "Brand Awareness: The Critical Key to Success," IDC/LINK #11179, Volume 1, Tab 1 Market Analysis (March 1996), p. 8. IDC/LINK provided the detailed data directly.

36. The FCC also collects data that enable comparisons among individual local exchange carriers.[42] According to the FCC data obtained from the carriers, customer satisfaction with SWBT has been close to that for the Bell companies as a whole in recent years. For residential customers, from 1H91 through 1H95 (the most recent period with data in the FCC report) the percentage of customers satisfied has exceeded that of the Bell average for seven out of nine semiannual periods and has equaled the average in one period. During that four and a half years as a whole, an average of 94.7 percent of SWBT residential customers were satisfied, as compared with 93.5 percent for the Bell companies in total. The percentage of SWBT small business customers who were satisfied averaged 94.1 compared with 93.0 for the Bell companies as a whole.[43]

37. Since divestiture, the RBOCs have developed marketing and competitive skills that were inadequate prior to divestiture. Moreover, they have cut costs. For example, SWBT reduced its employees per access line by 16 percent from 1991 to 1995.[44] That is equivalent to a 4.25 percent per year reduction, compounded, in spite of an increase in usage per line and the introduction of new services. The RBOCs have honed their competitive skills in a variety of markets that have become competitive or that were competitive early on. Such markets include customer premises equipment, cellular service, certain vertical services, Centrex service, inside wiring installation and maintenance, Yellow Pages, billing and collection services offered to interexchange carriers, and, more recently, intraLATA toll service.

38. Staffing heavily from SWBT (and other telecommunications firms), SBLD will obviously be thoroughly experienced in the telecommunications industry, its market needs, its operational

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[42] Jonathan M. Kraushaar, "Update on Quality of Service for the Local Operating Companies Aggregated to the Holding Company Level," Common Carrier Bureau—Industry Analysis Division, Federal Communications Commission (March, 1996). The report cautions that some of the data might not be fully consistent among companies or over time for a given company. The FCC aggregates operating-company data to the holding company level using an unweighted average of operating-company data. The FCC report does not cover non-Bell companies.

[43] The FCC report also shows data for large business customers; however, the data are not available for all companies for all years. The FCC reports an RBOC average only through the first half of 1993. Satisfaction of SWBT's large business customers exceeded the RBOC average for all five semiannual periods since 1991.

[44] SBC annual reports. The data on the number of employees are for SBC as a whole, before the SBC-Pacific Telesis merger.

requirements, its technologies, and its equipment suppliers In particular, its employees will have experience in the toll market because SWBT had already been providing intraLATA toll services.

39. When entering the interLATA market. SBLD might position itself as a low-priced carrier. It might instead differentiate itself by providing superior customer service, quality, or distinctive services. Either way, this additional competition would force the incumbents to reduce prices or to improve their service and quality Whatever the competitive response, customers would benefit.

## VII. Carrier Access Rates Above Costs Will Not Harm Competition

40. I leave to other affiants most of the discussion of whether competition and regulatory safeguards are sufficient to protect the interexchange market from anticompetitive abuses. One topic, however, I will address because I have written on the subject and because I have frequently seen erroneous claims regarding it. All parties—myself included—agree that current rates for carrier access are above the cost of providing the service. This differential has helped to keep rates lower for other services—in particular, residential basic service. The incumbent interexchange carriers and others have claimed that this differential would give a local exchange carrier (LEC) an artificial cost advantage that would cause it to discriminate against competitors and expand its long distance output at the expense of competitors. There are two versions of this claim, the simple version and the subtle version. so I deal with each version in turn.

41. First consider the simple version of the claim According to this version, to maximize overall corporate profits, the LEC's long distance affiliate would choose a price level using the true economic cost of carrier access in its calculations rather than the tariff price of carrier access that the incumbent interexchange carriers must pay As the argument goes, the affiliate could profitably take customers away from its competitors even if it were less efficient than its competitors.

42. This naïve argument is flat-out wrong. Think about what happens if the long distance affiliate were to take, say, 100 minutes away from a competitor. The LEC would no longer receive carrier access revenues from that competitor. To make decisions about how to maxi-

mize profits, the LEC corporate parent must recognize the lost access revenues as an opportunity cost of having its long distance affiliate carry the 100 minutes. If the affiliate cannot earn enough revenue to cover both its own costs and the opportunity cost of access, then its taking the 100 minutes away from the competitor would be unprofitable for the LEC corporate parent.

43. Consider a simple example. For illustration, assume the following:

- the price of carrier access is 6 cents per minute,
- the LEC's incremental cost of access is 1 cent per minute,[45]
- the market price of long distance service is 16 cents per minute, and
- the incremental cost of both the LEC's long distance affiliate and the incumbent IXCs is 10 cents per minute.

44. Let us look at the problem from a financial point of view. Consider Scenario 1: An incumbent interexchange carrier carries 100 minutes. In that case, the LEC's access revenues are $6.00, its incremental access costs are $1.00, and it earns no profits in the long distance market, so its total corporate profits are $5.00.

45. Now consider Scenario 2: the LEC's long distance affiliate carries that 100 minutes instead. The LEC no longer earns those access revenues from the incumbent interexchange carriers. The only revenues to account for are the long distance affiliate's revenues of $16.00 (100 minutes times the price of 16 cents per minute). We have to account for two sources of costs. First, the LEC's long distance affiliate bears a cost of $10 (100 minutes times its incremental cost of 10 cents per minute). Second, the LEC bears a cost of providing access of $1.00 (100 minutes times an incremental cost of one cent a minute). For the LEC corporation as a whole, its profits equal its long distance revenues of $16.00 minus its long distance costs of $10.00 minus its access costs of $1.00; *i.e.*, its total corporate profits are $5.00—precisely the same amount as it earned in Scenario 1, when the incumbent interexchange carrier carried the

[45] For simplicity of the illustration, I assume here that there are no economies of scope between the LEC's provision of carrier access service to its long distance affiliate and the affiliate's provision of long distance service. There might indeed be such economies of scope.

100 minutes. To summarize, the LEC corporate profits in the two scenarios and the difference in profits are as follows:

**Table 5**
**Illustration Showing LEC's Lack of Profit Incentive to Discriminate**

| | Incumbent IXC Carries | LEC LD Affiliate Carries | Change in Profit |
|---|---|---|---|
| Long distance revenue | $ 0.00 | $16.00 | $16.00 |
| Long distance costs (neg.) | $ 0.00 | ($10.00) | ($10.00) |
| Access revenue | $ 6.00 | $ 0.00 | ($ 6.00) |
| Access costs (neg.) | ($ 1.00) | ($ 1.00) | $ 0.00 |
| Total | $5.00 | $ 5.00 | $ 0.00 |

As you can see, the LEC corporation as a whole makes exactly the same profit in the two scenarios. Therefore, the naïve claim about access charges is wrong. The LEC corporation as a whole does not increase profit by taking business away from an equally-efficient competing interexchange carrier.

46. In that simple illustration I pretended that the long distance market is highly competitive, so the market price equals the sum of the price of access and the cost of long distance. If the long distance market is not fully competitive, as it appears not to be, then the market price would exceed the costs of the incumbent interexchange carriers. In that case, the LEC corporation as a whole would make more profits if the LEC long distance affiliate were to carry the 100 minutes than if the incumbent interexchange carriers were to carry them. But that outcome results from the lack of competitiveness in the market, not from a price of access that exceeds its incremental costs. The LEC long distance affiliate, making its own decisions and taking its carrier access bills as a cost, would make the same decisions about whether to carry traffic as the LEC corporate CEO would have made. Consequently, there is no reason to postpone SBLD's entry into the in-region long distance market until SWBT reduces access charges to cost.

47. Now consider the more subtle argument, according to which the LEC would increase its access profits if its long distance affiliate could somehow cause the market price of long distance

services to fall and thereby stimulate demand for the LEC's carrier access services. That outcome is not a policy problem, since it improves economic welfare, driving prices closer to economic costs.

48. Professor Franklin Fisher, however, raised the concern that a LEC and its long distance affiliate (an "integrated LEC") would behave differently from an unintegrated provider and might expand output even if it were less efficient than its rivals.[46] The potential for an economic problem in this theory arises because the gain in economic welfare from driving long distance prices closer to economic costs might be exceeded by the increase in industry costs. If so, there theoretically could be a loss of economic efficiency. However, as my co-authors and I pointed out in a recent paper,[47] such losses would be outweighed by consumer economic welfare gains from the expansion of industry output as long distance prices are driven closer to economic costs. We found conclusively that, for a wide range of reasonable assumptions, the entry of a vertically integrated LEC would cause an increase in consumer plus producer surplus, even if it were less efficient than its rivals.[48] The economic welfare gain is larger if the vertically-integrated LEC maximizes total corporate profits—taking into account the additional contribution the corporation receives from expanded carrier access demand—than if the LEC's long distance affiliate maximizes only its own profits.

49. Thus, our model shows that, under plausible assumptions, Professor Fisher is half right—the incremental profits in long distance and carrier access cause an integrated firm to select a

[46] Franklin M. Fisher, "An Analysis of Switched Access Pricing and the Telecommunications Act of 1996."

[47] Paul J. Hinton, J. Douglas Zona, Richard L. Schmalensee, and William E. Taylor, "An Analysis of the Welfare Effects of Long Distance Market Entry by an Integrated Access and Long Distance Provider," *Journal of Regulatory Economics*, Vol. 13 (1998), pp. 183-196.

[48] We estimated that entry by a vertically-integrated LEC, maximizing total corporate profits, would increase net consumer plus producer surplus by $0.80 per line per month. There are about 100 million residential lines in the U.S.; thus, on a national basis, that represents a welfare gain for residential customers alone of about $1 billion a year. Even under an extreme assumption that the LEC's long distance affiliate might be 20 percent less efficient than the incumbent interexchange carriers, the welfare gain still exceeds $0.60 per line per month. After completing the article, we also found through subsequent research that the conclusions are robust with respect to changes in the technical behavior assumptions of the LEC—whether the LEC assumes that its output decisions do not affect the outputs of competitors or whether it anticipates and takes into account rival output changes responding to its own actions.

larger level of output from what an unintegrated firm would select. However, Professor Fisher is wrong in his conjecture that this leads to losses in economic efficiency.

50. Our results are consistent with the findings of Sibley and Weisman.[49] Using a simple model of the long-distance market, they find that combined profit-maximizing behavior of the LECs in a substantial range of circumstances gives them the incentive to reduce rather than raise their rivals' costs. In sum, the entry of an integrated LEC into the long distance market is procompetitive for reasonable ranges of parameter values. Furthermore, the economic welfare gains from RBOC entry into the long distance market would be larger now—while access charges are still higher than costs—than such gains would be later when local competition competes down access prices closer to costs.

## VIII. CONCLUSIONS

51. As we have seen, current long distance competition for the consumer segment is inadequate, and the interexchange carriers have increased rates for this segment. Entry by a strong competitor could break down the pricing discipline that the Big Three have succeeded in maintaining in recent years. Southwestern Bell has a good market position to expand its service offerings to include interexchange services. After expiration of the separate-subsidiary restrictions established by the Act and implemented by the FCC order in Docket 96-149, it will be helped by additional economies of scope.

52. At least one economy of scope will be realizable immediately, even under the separate-subsidiary requirement—the benefit of the existing Southwestern Bell brand name. As explained in Section VI, through its high-quality service and advertising, SWBT has achieved considerable customer recognition, loyalty, and trust. Many customers might have hesitated to buy their interexchange service from a "no-name" carrier. (I do not intend to disparage the small interexchange carriers but rather to indicate how a customer, unfamiliar with the quality and value of such a carrier's services, might tend to perceive them.) In contrast, most of SWBT's customers

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[49] David S. Sibley and Dennis L. Weisman, "The Competitive Incentives of Vertically Integrated Local Exchange Carriers: An Economic and Policy Analysis," *Journal of Policy Analysis and Management*, forthcoming Vol. 17, No. 1, 1997.

are familiar with the Southwestern Bell brand name and have a favorable opinion about the company's quality of service and value. Thus, on this basis at least, SBLD might be able to offer an effective competitive challenge to existing interexchange carriers even if it were to enter the long distance market as a pure reseller. In addition, the SBC family is large (although not nearly as large as AT&T or MCI); it has substantial positive cash flows; it has healthy relations with the stock, bond, and banking markets; and its securities are rated as low risk. Thus, it is in a good position to fund necessary construction and entry start-up costs. For all the above reasons, SBLD is a credible competitor in the long distance market and so has good prospects for intensifying competition in that market. Such an intensification of competition would benefit consumers and would be in the public interest. Current carrier access charges, set above costs, are not a threat to those consumer benefits.

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Richard L. Schmalensee

Subscribed and sworn to before me this ____ day of January 1997.

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Notary Public

My commission expires: ______________________

# CURRICULUM VITAE

Richard Schmalensee

Massachusetts Institute of Technology
Room E52-474, 50 Memorial Drive
Cambridge, Massachusetts 02139
(617) 253-2957 fax: 258-6617

20 Malia Terrace
Chestnut Hill, Massachusetts 02167
(617) 566-0664 fax: 566-6492

## EDUCATION:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
S.B., Economics, Politics and Science, 1965
Ph.D., Economics, 1970

## EMPLOYMENT:

| | |
|---|---|
| | MASSACHUSETTS INSTITUTE OF TECHNOLOGY |
| 1996- | Deputy Dean, Sloan School of Management |
| 1991- | Director, Center for Energy and Environmental Policy Research |
| 1988- | Gordon Y Billard Professor of Economics and Management |
| 1986- | Professor, Department of Economics |
| 1979- | Professor, Sloan School of Management |
| 1977-79 | Associate Professor, Sloan School of Management |
| 1970 | Assistant Professor, Sloan School of Management (Spring) |
| 1967-69 | Instructor, Sloan School of Management |
| | PRESIDENT'S COUNCIL OF ECONOMIC ADVISORS |
| 1989-91 | Member |
| 1967 | Junior Staff Economist (Summer) |
| | UNIVERSITY OF CALIFORNIA, SAN DIEGO |
| 1974-77 | Associate Professor, Department of Economics |
| 1970-74 | Assistant Professor, Department of Economics |

## VISITING APPOINTMENTS:

| | |
|---|---|
| 1985-86 | Visiting Professor, Harvard Business School |
| 1985 | Visiting Professor, CORE, University of Louvain, Belgium (Spring) |
| 1980-81 | Visiting Scholar, Department of Economics, Harvard University |
| 1973-74 | Visiting Associate Professor and Research Fellow, Department of Economics, University of Louvain, Belgium |

## EDITORIAL SERVICE:

Editorial Board: *Journal of Economics and Management Strategy*, 1992-
Associate Editor: *Journal of Economic Perspectives*, 1992-
Associate Editor: *Zeitschrift für Nationalökonomie*, 1987-89, 1993-
Associate Editor: *International Journal of Industrial Organization*, 1982-89
Board of Editors: *American Economic Review*, 1982-86
Associate Editor: *Recherches Economiques de Louvain*, 1979-89
Founding Editor, 1978-89; Co-Editor, 1989- MIT Press Series, *Regulation of Economic Activity*
Associate Editor, 1977-81; Board of Editors, 1981-89: *Journal of Industrial Economics*

## PROFESSIONAL ASSOCIATIONS:

American Economic Association: Executive Committee, 1993-95; Budget Committee, 1993-95; Nominating Committee, 1987; Advisory Committee on Meetings Program, 1986, 1989, 1994

Econometric Society: Chairman, Local Arrangements Committee, 1985 World Congress; Chairman, Program Committee, 1980 North American Fall Meeting; Program Committee, 1980 World Congress

## SLOAN SCHOOL ADMINISTRATION:

Deputy Dean, 1996-
Area Head: Economics, Finance, and Accounting, 1987-89
Coordinator: Applied Economics Group, 1986-87
Chairman: Doctoral Program Committee, 1982-85

## CONSULTATION AND GOVERNMENT SERVICE (SELECTED):

National Research Council, Transportation Research Board, Committee for the Study of Transportation and a Sustainable Environment, 1994-
Environmental Economics Advisory Board, U.S. EPA, 1992-96
Chairman: Clean Air Act Compliance Analysis Council, U.S. EPA, 1992-96
Special Consultant: National Economic Research Associates, Inc., 1981-89, 1991-
Antitrust Division, U.S. Department of Justice, 1991-92 (1992 Merger Guidelines)
Bureau of Economics, U.S. Federal Trade Commission, 1972-81 (Antitrust Policy)

## AWARDS AND OTHER PROFESSIONAL ACTIVITIES:

Fellow: American Academy of Arts and Sciences, 1995-
(with P.L. Joskow and N. Tsukanova) 1995 Edward A. Hewett Prize, American Association for the Advancement of Slavic Studies
Board of Academic Advisors: Pioneer Institute for Public Policy Research, 1995-
*Revista de Análisis Económico* Lecture, Econometric Society Latin American Meeting, 1994
Research Associate: National Bureau of Economic Research, 1992-
Board of Directors: Long Island Lighting Company, 1992-
Donald Gilbert Memorial Lecture, University of Rochester, 1992
Board of Directors: American Council for Capital Formation Center for Policy Research, 1991-
Fellow: Econometric Society, 1982-

## BOOKS WRITTEN:

*The Economics of Advertising* (Vol. 80, Contributions to Economic Analysis), Amsterdam: North-Holland, 1972.

*Applied Microeconomics: Problems in Estimation, Forecasting and Decision-Making*, San Francisco: Holden-Day, 1973.

*An Introduction to Applied Macroeconomics* (with E. Kuh), Amsterdam: North-Holland, 1973. Japanese Edition, Tokyo: McGraw-Hill Kogakusha, 1975

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*Markets for Power: An Analysis of Electric Utility Deregulation* (with P. L. Joskow), Cambridge: MIT Press, 1983.

*Economics*, 2nd Edition (with S. Fischer and R. Dornbusch), New York: McGraw-Hill, 1988.

## BOOKS EDITED:

*The Empirical Renaissance in Industrial Economics* (co-editor, with T. F. Bresnahan), Oxford: Basil Blackwell, 1987.

*Handbook of Industrial Organization* (co-editor, with R. D. Willig), Amsterdam: North-Holland, 1989.

## JOURNAL ARTICLES:

"Regulation and the Durability of Goods." *Bell Journal of Economics and Management Science*, Vol. 1 (Spring 1970), pp. 54-64.

"Consumer's Surplus and Producer's Goods." *American Economic Review*, Vol. 61 (September 1971), pp. 682-687.

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"A Note on the Theory of Vertical Integration." *Journal of Political Economy*, Vol. 81 (March/April 1973), pp. 442-449.

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